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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,772	07/20/2005	Kenichi Miyoshi	L9289.05158	9215

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EXAMINER

SAMUEL, DEWANDA A

ART UNIT	PAPER NUMBER
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2416

MAIL DATE	DELIVERY MODE
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02/03/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/542,772	Applicant(s) MIYOSHI ET AL.	
	Examiner DEWANDA SAMUEL	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,4-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 4-6 is/are allowed.
- 6) ☐ Claim(s) 7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the communication filed 10/09/2008.
2. Claims 2 and 4-8 are pending.

Response to Arguments

Applicant's arguments with respect to claims 7 and 8 have been considered but are moot in view of the new ground(s) of rejection.

The indicated allowability of claims 7 and 8 are withdrawn in view of the newly discovered reference(s) to Raleigh et al. (US Patent 6,795,426) and Schramm (US Patent 7,187,646). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 7 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raleigh et al. (US Patent 6,795,426) in view of Schramm (US Patent 7,187,646).

With regard to claim 7, an OFDM signal collision position detection method comprising: a step of predicting reception power of a data signal from reception power

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of a known signal,(**Raleigh et al. discloses having an realtime power control in OFDM systems, see title. Raleigh et al. further discloses power measurement processor 322 which measures received power for the various subscribers units sharing each burst, see col. 6 lines 37-50. Raleigh et al. further discloses the power measurement processor uses the first set of one or more frequency domain symbols interpreted as a “reception power of a known signal” of the burst to measure power, see col. 3 lines 20-28**) ; and a step of comparing reception power of said predicted data signal with the actually measured reception power of the data signal for each subcarrier and every burst period and regarding, (**see col. 3 lines 17-28**).

However, Raleigh et al. does not discloses when the reception power of the data signal is changed from the reception power predicted from the reception power of the known signal, the data signal as being involved in a collision between a plurality of cells and thereby detecting positions of data symbols colliding with each other between a plurality of cells, (**Schramm discloses having a signal power variation determining unit VS-DET which detects OFDM reception signal RS interpreted as a “reception power”. Schramm further discloses a first link quality measurement Q1 representing the variation of the subscriber signal power interpreted as “reception power of a known signal”, see col. 10 lines 30-40. Schramm disclose detecting subcarrier symbols in a time and frequency domain, see col. 10 lines**

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54-67).It is construed the detection of subcarrier symbols technique prevents interference between subcarriers which can be locate in different cell sites.

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a signal power determining unit which is taught by Schramm into Raleigh's system detecting signal reception power whereby efficiently reducing interference for subscribers.

With regard to claim 8, an OFDM reception method, comprising: a step of predicting reception power of a data signal from reception power of a known signal, (Raleigh et al. discloses having an realtime power control in OFDM systems, see title. Raleigh et al. further discloses power measurement processor 322 which measures received power for the various subscribers units sharing each burst, see col. 6 lines 37-50. Raleigh et al. further discloses the power measurement processor uses the first set of one or more frequency domain symbols interpreted as a "reception power of a known signal" of the burst to measure power, see col. 3 lines 20-28) a step of comparing reception power of said predicted data signal with the actually measured reception power of the data signal for each subcarrier and every burst period and regarding, (see col. 3 lines 17-28); and

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a step of applying error correcting decoding processing by reducing likelihood of data symbols at positions where the collision is detected, (**see col. 6 lines 51-67, a error correcting decoding reducing interference**).

However, Raleigh et al. does not discloses when the reception power of the data signal is changed from the reception power predicted from the reception power of the known signal, the data signal as being involved in a collision between a plurality of cells and thereby detecting positions of data symbols colliding with each other between a plurality of cells, (**Schramm discloses having a signal power variation determining unit VS-DET which detects OFDM reception signal RS interpreted as a “reception power”. Schramm further discloses a first link quality measurement Q1 representing the variation of the subscriber signal power interpreted as “reception power of a known signal”, see col. 10 lines 30-40. Schramm disclose detecting subcarrier symbols in a time and frequency domain, see col. 10 lines 54-67).It is construed the detection of subcarrier symbols technique prevents interference between subcarriers which can be locate in different cell sites.**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a signal power determining unit which is taught by Schramm into Raleigh's system detecting signal reception power whereby efficiently reducing interference for subscribers.

Allowable Subject Matter

5. **Claims 2 and 4-6** are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEWANDA SAMUEL whose telephone number is (571)270-1213. The examiner can normally be reached on Monday- Thursday 8:30-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art
Unit 2416

/DeWanda Samuel/
Examiner, Art Unit 2416
2/3/2009